Lesson 21: Acquisition Logistics: Supportability Planning

Support Elements

Every Acquisition program, regardless of size, must plan for 10 logistics support elements:

1. Maintenance Planning
2. Manpower and Personnel
3. Supply Support
4. Training and Training Devices
5. Support Equipment
6. Packaging, Handling, Storage, and Transportation
7. Facilities
8. Computer Resource Support
9. Technical Data
10. Design Interface

Back to Topics List Back to Top

Maintenance Planning

The purpose of maintenance is to ensure that the system can be maintained effectively and economically at the desired level of readiness after it is placed in operational use. Maintenance planning ensures that all required maintenance assets are placed to support deployment.

Maintenance planning specifies when, where, and how maintenace tasks will be performed on the system, including both:

- Preventative maintenance
- Repairs

The military historically has three levels of maintenance:

- Organizational – Personnel from the using unit make the repair.
- Intermediate – The repair is completed at a facility in the fleet or field.
- Depot – The repair is made at a major facility for repair by contractor or Government civilian personnel.

Back to Topics List Back to Top

Manpower and Personnel

Manpower and personnel are the "spaces and faces" support element of acquisition logistics. This element involves the identification and programming:

- For military and civilian personnel

- With skills and grades required to operate and support the system
- Over its entire life cycle
- In peacetime and war

Manpower refers to spaces (billets)–the number of people required for the mission. Manpower planning is resource driven and must be considered in the Planning, Programming, and Budgeting System (PPBS) process.

Personnel refers to faces–actual assigned people–civilians, officers, and enlisted personnel. Personnel must meet certain education, training, skill, and other administrative requirements.

Together, manpower and personnel are the highest life cycle cost drivers.

Back to Topics List Back to Top

Supply Support

Supply support means having the right part in the right place at the right time in the right quantity at the most economical cost.

Spare parts, or spares, are components or assemblies used for maintenance replacement purposes in major items of equipment. Spare parts may be classified into:

- Repair parts
- Consumable items

Item	Description
Repair Parts	Components, modules, assemblies, or subassemblies that can be restored to like-original condition when they become unserviceable. Some examples of repair parts include: circuit boards, radios, modular components, electronic display modules, and "black boxes."
Consumable Items	Also known as consumables, are parts or items that are consumed in use and are not intended for repair. Examples of consumable items are items used to repair repairables (e.g., nuts, bolts, washers, and cleaners).

Back to Topics List Back to Top

Training and Training Devices

Training and training devices include the processes, procedures, techniques, and equipment used to train civilian and military personnel to operate and support the system. This includes:

- Individual and crew training (initial and continuation).
- New equipment training.
- Initial, formal, on-the-job, or embedded training.

The quality, quantity, and timing of training must be integrated with personnel and deployment planning to ensure that the system can be operated and maintained effectively from the start.

Training types include: traditional classroom, computer-based training, distance learning, and self-instruction.

Training may be located: at a school, on site in a classroom, on the job using system equipment or simulators, or embedded in the system itself.

Training devices include: simulators, as well as special facilities, equipment, or personnel required to perform the training.

Back to Topics List Back to Top

Support Equipment

Support Equipment encompasses all equipment required to perform system operation and maintenance. This includes associated:

- Multi-use end items (e.g., generators, hydraulic jacks, etc.).
- Ground handling and maintenance equipment.
- Tools.
- Organizational, field, and depot support equipment (e.g., electronic test equipment, cranes, lift trucks, lathes and other machine shop equipment, etc.).
- Metrology and calibration equipment.
- Test equipment.
- Automatic Test Equipment (ATE), which includes:
  - Hardware and operating system software.
  - Test program sets that include the interface test adapter hardware and software programs to test individual weapon electronic items.
  - Associated software development environments and interfaces.
- Related computer programs.

Back to Topics List Back to Top

Packaging, Handling, Storage, and Transportation

Packaging, Handling, Storage, and Transportation (PHST) includes the resources, processes, procedures, design considerations, and methods to ensure that the system, equipment, and support items are properly packaged and preserved, handled, stored, and transported.

PHST includes:

- Containers and packing materials.
- Forklift trucks.
- Cargo ships and aircraft, including commercial transport.
- Dock workers.
- Transportation schedules and other paperwork.
- Warehouses, including warehouse security measures.
- Measures taken to preserve the condition of the items.

Key emphasis is on the avoidance of damage or deterioration in safe and timely movement and storage of systems. New systems should be designed to utilize standard DOD transport equipment. A certificate of transportability must be obtained by system Program Managers to ensure the system meets DOD transportability requirements for weight, cube, and overall dimensions.

Back to Topics List Back to Top

Facilities

Facilities constitute all permanent or semi-permanent real property assets required to support a system, including major modification of existing structures.

Systems design should strive to minimize or eliminate the facilities required to operate and support a defense system. Where facilities are demonstrated to be absolutely needed, maximizing the use of existing facilities should be considered.

Facilities must be considered very early in the acquisition process because, if Military Construction (MILCON) funding is necessary, the lead time for funding may be from 4 to 7 years.

Back to Topics List Back to Top

Computer Resource Support

Hardware and software are critical for operating most major weapons systems. Computer resource support includes the facilities, hardware, software, documentation, and people needed to operate and support embedded computer systems.

Back to Topics List Back to Top

Technical Data

Technical data are scientific information (recorded in any form or medium) necessary to operate and/or maintain a defense system. Data requirements should be consistent with the planned support concept and represent the minimum essential required to support the fielded system effectively.

Technical Data Package

Technical data are used to provide sufficient information to manufacture and support the system after deployment. When combined, this information is called the Technical Data Package (TDP) and may include:

- Engineering drawings and specifications.
- Process descriptions.
- Other documents that define the physical dimensions, materials composition, performance characteristics, manufacture, assembly, and acceptance test procedures for producing and/or supporting the system.

Back to Topics List Back to Top

Design Interface

Design interface is one of the traditional elements of logistics support and one critical function of logistics. The design interface ensures that there is a relationship between the design parameters such as reliability and maintainability, and readiness and support requirements. For example, the acquisition logistician would ensure that the design interface for a UHF antenna allows for easy mounting and maintenance of the item on an M-1 tank.

The early focus should result in the establishment of support-related design parameters. These parameters should:

- Be expressed both quantitatively (e.g., Mean Time Between Failures (MTBF) and Mean Time To Repair (MTTR)) and qualitatively (e.g., human factors) in operational terms.
- Relate specifically to systems readiness objectives and the support costs of the system.

Back to Topics List Back to Top

Support Planning

Program plans, excluding the Test and Evaluation Master Plan (TEMP), are not required in support of milestone decisions and shall not be used as milestone documentation or periodic reports. The acquisition logistician is usually responsible for planning program logistics support. Although logistics support plans are typically documented in a form acceptable to the Program Executive Officer/Program Manager (PEO/PM), a specific, formal formatted plan for support is not required.

Support Planning and Systems Engineering

Support planning is critical to the Systems Engineering Process. Its goal is to provide supportability information early on so that critical factors can be considered during Systems Engineering.

Back to Topics List Back to Top